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EXAMINER
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GREENE, JASON M

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 12/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/743,810

Applicant(s)

KOLSTAD ET AL.

Examiner

Jason M. Greene

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 17-34 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17, 19-25, 27-30, 32 and 34 is/are rejected.
- 7) ☒ Claim(s) 18, 26, 31 and 33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/24/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 17, 19-25 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by International Patent Application Publication WO 02/063145 A2.

With regard to claims 17, 24 and 25, WO 02/063145 A2 discloses a filter comprising a plurality of filter elements (18), each of the filter elements comprising a corrugated electrically conductive metallic wire mesh, a holding member (28) insulating (through ceramic plate 30) each of the plurality of filter elements from adjacent filter elements and positioning each of the filter elements relative to the adjacent filter element, and at least one electrical connector (22,23) on each end of the plurality of filter elements, wherein the plurality of filter elements are electrically connected to each other on at least one end (through contact bodies 22 and 23 and circuit 24) in Figs. 1-3 and 6-8 and page 11, line 11 to page 14, line 17.

With regard to claims 19-23, WO 02/063145 A2 discloses the holding member (28) comprising a metal rim (29) that can be formed by extrusion or casting or as a single folded (to form the rim) metal portion, the holding member also including a non-metallic ceramic plate (30) including an impression (recess 31) matching a shape of the plurality of filter elements, wherein positioning bumps are formed by the portions of the ceramic plate between the impressions (31) in Figs. 2a-2d and page 12, line 12 to page 13, line 11.

With regard to claim 28, WO 02/063145 A2 discloses the holding member (28) being coated with a non-conductive material (ceramic felt disc 14) in Fig. 1 and page 11, lines 15-24.

3. Claims 17, 20, 24, 25 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Peter et al. '682 (U.S. Patent No. 6,572,682 B2).

With regard to claims 17, 24 and 25, Peter et al. '682 discloses a filter comprising a plurality of filter elements (60), each of the filter elements comprising a corrugated electrically conductive metallic wire mesh (62), a holding member (66, 68) insulating (by insulative member 70) each of the plurality of filter elements from adjacent filter elements and positioning each of the filter elements relative to the adjacent filter element, and at least one electrical connector (64) on each end of the plurality of filter elements, wherein the plurality of filter elements are electrically connected to each other

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on at least one end (through control module 40) in Figs. 1 and 5-9 and col. 5, line 61 to col. 9, line 56.

With regard to claims 20 and 28, Peter et al. '682 teaches the holding member comprising a metal shape that can be formed by extrusion, wherein the holding member is coated with a non-conductive material (insulative member 70) in Figs. 5-9 and col. 8, lines 35-63.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over International Patent Application Publication WO 02/063145 A2 or Peter et al. '682 (U.S. Patent No. 6,572,682 B2).

WO 02/063145 A2 teaches the holding member being substantially circular or oval and having a constant cross-section in Fig. 1-3 and 6. Peter et al. '682 teaches the holding member being substantially circular and having a constant cross-section in Figs. 5-9.

While WO 02/063145 A2 and Peter et al. '682 do not teach the holding member being rectangular, it would have been obvious to one of ordinary skill in the art at the time the invention was made to change the shape of the filter elements (and therefore the holding members) of WO 02/063145 A2 or Peter et al. '682 to rectangular in that such is merely a choice of design. See *In re Dailey et al.*, 149 USPQ 47.

6. Claims 29, 30, 32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mertz et al. (U.S. Patent No. 6,846,342 B2 in view of Nolen, Jr. (U.S. Patent No. 5,145,500).

Mertz et al. discloses a filter (30) comprising a plurality of polymeric wire mesh filter elements (12), and a (folded) holding member (formed by a pair of the adhesively connected banding frames 17) insulating each of the plurality of wire mesh elements from adjacent wire mesh elements and positioning each of the wire mesh elements relative to the adjacent wire mesh elements, wherein the holding member includes a base portion (the portions of the banding frames 17 connected by adhesive joint 38) and two side portions (the longitudinally extending sides on each of the banding members 17), the two side portions being configured to block lateral movement of each of the plurality of wire mesh elements, wherein the side portion are sealed to the plurality of wire mesh elements by an adhesive such that the holding member is coated with the non-conductive adhesive material, and wherein the holding member is corrugated (folded) and has a substantially constant cross-section in Fig. 5 and col. 2, lines 14-59.

Mertz et al. does not disclose the wire mesh elements being electrically conductive.

Nolen, Jr. discloses a similar filter (20) comprising a wire mesh element (22) formed of electrically conductive aluminum in Fig. 2 and col. 3, lines 39-61.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the aluminum material of Nolen et al. into the filter of Mertz et al. to provide filter elements having improved mechanical rigidity and strength and to allow the filters to be used to collect grease, as is well known in the art and suggested by Nolen, Jr. in col. 3, lines 52-61.

***Allowable Subject Matter***

7. Claims 18, 26, 31 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

With regard to claims 18 and 26, WO 02/063145 A2 discloses the holding member comprising a u-shaped metal section (metal rim 29) including a base portion and a single side portion configured to block lateral movement of the filter element (18),

wherein two adjacent holding members are separated by a ceramic felt disc (14) in Figs. 1-2d and page 11, line 13 to page 13, line 11. Peter et al. '682 discloses the holding member (66,68) comprising a flat metal disc, wherein two adjacent holding members are separated by a washer (72) in Figs. 5-9 and col. 8, lines 35-63.

The prior art made of record does not teach or fairly suggest the filter of claim 17 wherein the holding member includes two substantially u-shaped metal section welded together.

The prior art made of record does not teach or fairly suggest the filter of claim 17 wherein the holding member includes a base portion and two side portions, the two side portions being configured to block lateral movement of each of the plurality of filter elements.

With regard to claims 31, Mertz et al. discloses the side portions (of banding frame 17) being formed from a polymeric material which can be readably cut to a desired size, wherein the wire mesh element (12) is adhesively bonded to the holding member (banding frame 17) in col. 2, lines 14-21 and col. 3, lines 3-18.

The prior art made of record does not teach or fairly suggest the filter of claim 29 wherein the side portions are crimped to the plurality of wire mesh elements.

With regard to claim 33, the prior art made of record does not teach or fairly suggest the filter of claim 29 further including at least one electrical connector on each



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end of the plurality of wire mesh elements, wherein the plurality of wire mesh elements are electrically connected on at least one end.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Sherwood, Peter et al. '708, Buck, Ueda et al., Obuchi et al., Mizrah et al., Hansen, Onodera, Connors, Jr. and Sutton et al. references disclose similar filters.


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Greene whose telephone number is (571) 272-1157. The examiner can normally be reached on Monday - Friday (9:00 AM to 5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason M. Greene  
Examiner  
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12/5/05

jmg  
December 5, 2005